

Claims

1. A composite cut-resistant yarn comprising:

5 a. a core comprising at least one fiberglass strand and at least one wire strand of diameter sufficient to provide cut resistance, wherein said at least one fiberglass strand and said at least one wire strand are parallel to one another or twisted about one another and wherein only the core of the yarn contains metal; and

10 b. at least one non-metallic non-high performance fiber cover strand wrapped around said core in a first direction.

2. The composite cut-resistant yarn of claim 1, wherein said at least one wire strand has a diameter between about 0.0013 inch and 0.0036inch

15 3. The composite cut-resistant yarn of claim 1, wherein said at least one fiberglass strand has a denier of from about 50 to about 1200.

20 4. The composite cut-resistant yarn of claim 1, further comprising a second non-metallic, non-high performance fiber cover strand wrapped around said at least one non-metallic non-high performance fiber cover strand in a second direction opposite that of said at least one non-metallic non-high performance fiber cover strand direction.

25 5. The composite cut-resistant yarn of claim 1, wherein said first non-metallic, non high performance fiber cover strand is a material selected from the group consisting of polyester, polyester/cotton blends, nylon, acrylic, wool, and cotton.

30 6. The composite cut-resistant yarn of claim 4, wherein said second non-metallic, non high performance fiber cover strand is a material selected from the group consisting of polyester, polyester/cotton blends, nylon, acrylic, wool, and cotton.

7. The composite cut-resistant yarn of claim 1, wherein said core further comprises a second fiberglass strand, parallel or twisted with one or both of said at least one fiberglass strand or

said at least one wire strand.

8. The composite cut-resistant yarn of claim 1, wherein said core further comprises a second wire strand, parallel or twisted with one or both of said at least one fiberglass strand or said at least one wire strand.

9. The composite cut-resistant yarn of claim 1, wherein said at least one non-metallic non-high performance fiber cover strand is wrapped around said core at a rate of from about 6 to about 13 turns per inch.

10. The composite cut-resistant yarn of claim 1, wherein said at least one non-metallic non-high performance fiber cover strand has a denier of from about 50 to about 1200.

11. The composite cut-resistant yarn of claim 1, wherein said at least one wire strand is wrapped with a sheath of a non-metallic non-high performance fiber strand.

12. The composite cut-resistant yarn of claim 4, further comprising a third non-metallic non-high performance fiber cover strand wrapped around the combination of said core and said first and second non-metallic non-high performance fiber cover strands, in a third direction opposite to the second direction.

13. The composite cut-resistant yarn of claim 1, wherein the yarn or any portion thereof has been subjected to at least one treatment selected from the group consisting of antistatic treatments, antimicrobial treatments, treatments to provide radiation absorption, dyeing and combinations thereof.

14. A cut and abrasion resistant fabric formed primarily of a composite cut-resistant yarn comprising:

a. a core comprising at least one fiberglass strand and at least one wire strand of diameter sufficient to provide cut resistance, wherein said at least one fiberglass strand and said at least one wire strand are parallel to one another or twisted about one another and wherein only the core of the yarn contains metal; and

b. at least one non-metallic non-high performance fiber cover strand wrapped around said core in a first direction.

5 15. The cut and abrasion resistant fabric of claim 14, wherein said at least one wire strand has a diameter between about 0.0013 inch and 0.0036inch

16. The cut and abrasion resistant fabric of claim 14, wherein said at least one fiberglass strand has a denier of from about 50 to about 1200.

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17. The cut and abrasion resistant fabric of claim 14, further comprising a second non-metallic, non-high performance fiber cover strand wrapped around said at least one non-metallic non-high performance fiber cover strand in a second direction opposite that of said at least one non-metallic non-high performance fiber cover strand direction.

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18. The cut and abrasion resistant fabric of claim 14, wherein said first non-metallic, non high performance fiber cover strand is a material selected from the group consisting of polyester, polyester/cotton blends, nylon, acrylic, wool, and cotton.

20 19. The cut and abrasion resistant fabric of claim 17, wherein said second non-metallic, non high performance fiber cover strand is a material selected from the group consisting of polyester, polyester/cotton blends, nylon, acrylic, wool, and cotton.

25 20. The cut and abrasion resistant fabric of claim 14, wherein said core further comprises a second fiberglass strand, parallel or twisted with one or both of said at least one fiberglass strand or said at least one wire strand.

30 21. The cut and abrasion resistant fabric of claim 14, wherein said core further comprises a second wire strand, parallel or twisted with one or both of said at least one fiberglass strand or said at least one wire strand.

22. The cut and abrasion resistant fabric of claim 14, wherein said at least one non-metallic non-high performance fiber cover strand is wrapped around said core at a rate of from about 6

to about 13 turns per inch.

23. The cut and abrasion resistant fabric of claim 14, wherein said at least one non-metallic non-high performance fiber cover strand has a denier of from about 50 to about 1200.

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24. The cut and abrasion resistant fabric of claim 14, wherein said at least one wire strand is wrapped with a sheath of a non-metallic non-high performance fiber strand.

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25. The cut and abrasion resistant fabric of claim 17, further comprising a third non-metallic non-high performance fiber cover strand wrapped around the combination of said core and said first and second non-metallic non-high performance fiber cover strands, in a third direction opposite to the second direction.

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26. The cut and abrasion resistant fabric of claim 14, wherein said fabric is in the form of a member selected from the group consisting of aprons, gloves, arm shields, jackets and fencing uniforms.

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27. The cut and abrasion resistant fabric of claim 26, wherein said fabric is in the form of a glove.

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28. The cut and abrasion resistant fabric of claim 14, wherein the yarn or any portion thereof has been subjected to at least one treatment selected from the group consisting of antistatic treatments, antimicrobial treatments, treatments to provide radiation absorption, dyeing and combinations thereof.